UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/057,143	01/25/2002	Fabio Casati	10008149-1	2469

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EXAMINER
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ART UNIT	PAPER NUMBER
3623	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>18 June 2007</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>15-25</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>15-25</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

Introduction

1.   The following is a non-final office action in response to the communications

received on June 18, 2007. Claims 15-25 are now pending in this application.

Continued Examination Under 37 CFR 1.114

2.   A request for continued examination under 37 CFR 1.114, including the fee set

forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this

application is eligible for continued examination under 37 CFR 1.114, and the fee set

forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action

has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on June

18, 2007 has been entered.

Response to Amendments

3.   Applicants' amendments to claim 15 are acknowledged. The declarations and

evidence filed on June 18, 2007 under 37 CFR 1.131 is sufficient to overcome the

Casati et al. (Casati, Fabio; Grigori, Daniela; Dayal, Umesh; Shan, Ming-Chan;

"Improving Business Process Quality through Exception Understanding, Prediction, and

Prevention", *Proceedings of the 27th VLDB Conference*, 2001) reference.

Response to Arguments

4.   Applicants' arguments filed on June 18, 2007 have been fully considered but are

moot under new grounds of rejection.

Claim Rejections - 35 USC § 112

5.   The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of
> making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the
> art to which it pertains, or with which it is most nearly connected, to make and use the same and shall
> set forth the best mode contemplated by the inventor of carrying out his invention.

6.   Claims 21-22 are rejected under 35 U.S.C. 112, first paragraph, as failing to

comply with the enablement requirement. The claim(s) contains subject matter which

was not described in the specification in such a way as to enable one skilled in the art to

which it pertains, or with which it is most nearly connected, to make and/or use the

invention.

Claim 21 recites the feature of "selectively removing input data to refine the

classification rules". The scope of this limitation, as defined by the Specification, fails to

guide a user on how to "selectively" decide whether to remove a data value or not. As

such, claim 21 is not enabling.

Claim 22 recites the same subject matter as claim 21 and is rejected for the

same reasons discussed above.

Claim Rejections - 35 USC § 102

7.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public
> use or on sale in this country, more than one year prior to the date of application for patent in the United
> States.

8.   Claims 15-25 are rejected under 35 U.S.C. 102(b) as being anticipated by Casati

et al. (Casati, Fabio; Ceri, Stefano; Paraboschi, Stefano; Pozzi, Giuseppe;

"Specification and Implementation of Exceptions in Workflow Management Systems",

ACM Transaction on Database Systems, September 1999) (*previously cited and
provided*).

As per claim 15, Casati teaches:

A method for predicting exceptions in a workflow instance comprising:

The steps of:

a) preparing data from past workflow executions (see pp. 424 and 447; where
data from previously executed workflows is used in modeling workflow behavior.);

b) generating at least one exception prediction model based on the prepared
data (see pp. 424 and 447; where the implementation of an exception prediction
model derived from previously executed workflows is done.);

c) using the exception prediction model to generate at least one prediction of an
exception before the exception occurs for a current instance of the workflow (see pp.
406-408 and 419-424; where predictions of exceptions are done before their
occurrence.).

As per claim 16, Casati teaches:

The method of claim 15 wherein the exception prediction includes the steps of:

Building a process analysis table for a process definition of interest (see Figures
1 and 2; where a process analysis table for specific processes are defined.);

Adding labeling information to the process analysis table (see Figures 1 and 2;
where the tables are labeled.);

Generating classification rules by employing data mining techniques (see pp.

406-407, 419-424 and 438-440; where classification rules are created by using

historical data.).

As per claim 17, Casati teaches:

The method of claim 15 wherein classification rules are generated for each stage

in a process and are stored in a repository (see pp. 406-407 and 419-424; where the

rules are stored in a repository.).

As per claim 18, Casati teaches:

The method of claim 17 wherein at least one classification rule set generated for

a process execution stage is executed to make predictions on at least one running

process instance (see pp. 406-407 and 419-424; where the rules are run against

running process instances.).

As per claim 19, Casati teaches:

The method of claim 18 wherein at least one prediction is stored in the repository

includes the exception being predicted and an indication of an accuracy of the

prediction (see pp. 419-424 and 433-434; where the predicted rules are being stored

in the repository and there is a level of accuracy associated with them.).

As per claim 20, Casati teaches:

The method of claim 15 wherein the at least one prediction is reported to a

workflow management system (WfMS) so that the WfMS alters execution of the

processes to try to avoid the exception (see pp. 406-407 and 419-424; where the

occurrence of an exception is reported and the process definition is alter to account

for the predicted exception.).

As per claim 21, Casati teaches:

Reporting classification rules to a user (see p. 424; where the classification rules

are in a table accessible to the user. This is the same as reporting the rules to the

user.);

Selectively removing input data to refine the classification rules (see p. 424;

where rules are adjusted based on execution of the workflow.);

Re-generating the classification rules by employing data mining techniques (see

pp. 406-407, 419-424 and 438-440; where classification rules are adjusted based on

logged workflow executions.)

As per claim 22, Casati teaches:

The method of claim 21 wherein when the classification rules are satisfactory to

the user, storing the classification rules in a database (see pp. 406-407, 419-428 and

438-440; where the classification rules can be stored in a relational database.).

Claims 23-25 recite limitations already addressed by the rejections of claims 15-

22; therefore the same rejections apply to these claims.

Conclusion

9.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Kalyan K. Deshpande whose telephone number is

(571)272-5880. The examiner can normally be reached on M-F 8am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Tariq Hafiz can be reached on (571) 272-6729. The fax phone number for

the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

kkd

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